

We claim:

1           1.       A method for displaying a video image from an image signal on a video  
2 display having a first side and a second side opposite the first side, the video image  
3 including an active image area having a first side and a second side opposite the first side,  
4 the active image area having a different aspect ratio than the video display, the method  
5 comprising the steps of:

6               determining an offset corresponding to a difference between the first side of the  
7 video display and the first side of the active image area; and

8               adjusting the offset such that the active image is moved within the video display in  
9 at least a portion of an area defined by the first side and the second side of the video  
10 display.

1           2.       The method of claim 1, further comprising the step of:

2               calculating shift parameters for the active image with respect to the video display;

3               calculating a zoom value for enlarging the active image;

4               wherein the determining step comprises determining the offset based on the shift  
5 parameters and the zoom value.

1           3.       The method of claim 1, wherein the image signal has a synchronization  
2 signal corresponding to the first side of the video display when the image signal is  
3 presented by the video display and wherein:

4               the determining step comprises determining a delay period between the  
5 synchronization signal and the first side of the active image area; and

6               the adjusting step comprises adjusting the delay period.

1           4.     The method of claim 1, wherein the offset is adjusted such that the active  
2 image area is displayed in a plurality of different relative areas within the video display.

1           5.     The method of claim 1, wherein the offset is adjusted such that when the  
2 active image area is moving toward the first side of the video display the active image  
3 area is moved toward the first side of the video display until the first side of the active  
4 image area corresponds to the first side of the video display, when the active image area  
5 is moving toward the second side of the video display the active image area is moved  
6 toward the second side of the video display until the second side of the active image area  
7 corresponds to the second side of the video display, and when the active image area  
8 reaches one of the first and second sides of the video display the active image area is  
9 moved toward the second and first sides of the video display, respectively.

1           6.     The method of claim 1, wherein the offset is adjusted at a predefined rate,  
2 the predefined rate selected such that a human eye does not detect the movement of the  
3 active image area.

1           7.     The method of claim 1, wherein the video display includes a plurality of pixel  
2 rows parallel to the first side of the video display, the delay period is adjusted at a  
3 predefined rate, and the predefined rate is less than two pixel rows per minute.

1           8.     The method of claim 1, wherein the active image area is written to a  
2 memory buffer representing the video display prior to display on the video display and  
3 wherein the adjusting step comprises:

4           adjusting the position within the memory buffer where the active image area is  
5 written to move the position of the active image within the video display.

1           9.     The method of claim 1, wherein the video display has a deflection coil  
2 apparatus that deflects a raster to produce the active image area on the video display,  
3 wherein the adjusting step comprises:

4           adjusting signals applied to the deflection coil apparatus to deflect the raster such  
5 that the position of the active image is moved within the video display.

1           10.    A system for displaying a video image from an image signal on a video  
2 display having a first side and a second side opposite the first side, the video image  
3 including an active image area having a first side and a second side opposite the first side,  
4 the active image area having a different aspect ratio than the video display, the system  
5 comprising:

6           means for determining an offset corresponding to a difference between the first  
7 side of the video display and the first side of the active image area; and

8           means for adjusting the offset such that the active image area is moved within the  
9 video display in at least a portion of an area defined by the first side and the second side  
10 of the video display.

1           11.    The system of claim 10, further comprising:

2           means for calculating shift parameters for the active image with respect to the  
3 video display

4           means for determining a zoom value for enlarging the active image;

5           wherein the means for determining the offset determines the offset based on the  
6 shift parameters and the zoom value.

1           12.    The system of claim 10, further comprising:

2           means for storing a last position indicator corresponding to the last adjusted offset,  
3 wherein, at startup, the offset is set to the last adjusted offset.

1           13.    The system of claim 10, wherein the active image area is written to a  
2 memory buffer representing the video display prior to display on the video display and  
3 wherein the adjusting means comprises:

4           means for adjusting the position within the memory buffer where the active image  
5 area is written to move the position of the active image area within the video display.

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1           14.    The system of claim 10, wherein the video display has a deflection coil  
2    apparatus that deflects a raster to produce the active image area on the video display,  
3    wherein the adjusting means comprises:

4           means for adjusting signals applied to the deflection coil apparatus to deflect the  
5    raster such that the position of the active image area is moved within the video display.

1           15.    An apparatus for displaying a video image from an image signal on a video  
2    display having a first side and a second side opposite the first side, the video image  
3    including an active image area having a first side and a second side opposite the first side,  
4    the active image area having a different aspect ratio than the video display, the apparatus  
5    comprising:

6           an active video detector configured to determine shift parameters corresponding to  
7    a difference between the first side of the video display and the first side of the active  
8    image area.

9           a processor configured to determine an offset based on the shift parameters and to  
10   adjust the offset; and

11          an offset device coupled to the processor, the offset device configured to process  
12   the active image area for display on the video display responsive to the adjusted offset  
13   such that, when displayed, the active image area is moved within the video display in at  
14   least a portion of an area defined by the first side and the second side of the video display.

1           16.    The apparatus of claim 15, wherein the active video detector is further  
2    configured to determine a zoom value for enlarging the active image; and

3           wherein the shift parameters are based on the zoom value.

4           17.    The apparatus of claim 15, wherein the processor determines a delay period  
5    corresponding to the offset responsive to a difference between a synchronization signal  
6    corresponding to the first side of the video display and the first side of the active image

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7 area and adjusts the delay period synchronization signal to move the active image within  
8 the video display.

1 18. The apparatus of claim 15, further comprising:

2 a memory for storing a last position indicator corresponding to the last adjusted  
3 offset, wherein, at startup, the processor adjusts the offset to the last adjusted offset  
4 responsive to the last position indicator.

1 19. The apparatus of claim 15, wherein the offset device includes a memory  
2 having a buffer area corresponding to the video display and wherein the processor adjusts  
3 the offset by adjusting the position within the buffer area where the active image area is  
4 written, thereby moving the active image area within the video display.

1 20. The apparatus of claim 15, wherein the offset device is a deflection coil  
2 apparatus coupled to the video display to deflect a raster to produce the active image area  
3 on the video display and wherein the processor adjusts the offset by modifying signals  
4 applied to the deflection of the raster, thereby moving the position of the active image  
5 area within the video display.

1 21. A computer readable medium including software that is configured to control  
2 a general purpose computer to implement a method for displaying a video image from an  
3 image signal on a video display having a first side and a second side opposite the first  
4 side, the video image including an active image area having a first side and a second side  
5 opposite the first side, the active image area having a different aspect ratio than the video  
6 display, the method including the steps of:

7 determining an offset corresponding to a difference between the first side of the  
8 video display and the first side of the active image area; and

9 adjusting the offset such that the active image is moved within the video display in  
10 at least a portion of an area defined by the first side and the second side of the video  
11 display.

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1           22.    The computer readable medium of claim 21, wherein the method  
2 implemented by the general purpose computer further includes the steps of:

3           calculating shift parameters for the active image with respect to the video display;

4           calculating a zoom value for enlarging the active image;

5           wherein the determining step comprises determining the offset based on the shift  
6 parameters and the zoom value.

1           23.    The computer readable medium of claim 21, wherein the active image area  
2 is written to a memory buffer representing the video display prior to display on the video  
3 display and wherein the adjusting step for implementation by the general purpose  
4 computer includes the step of:

5           adjusting the position within the memory buffer where the active image area is  
6 written to move the position of the active image within the video display.